



STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

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September 15, 2011

Bruce L. McDermott
Managing Counsel – Operations
General Counsel and Corporate Secretary
UIL Holdings Corporation
P.O. Box 1564
New Haven, CT 06506-0901

RE: **LIFE-CYCLE 2011** – Connecticut Siting Council Investigation into the Electric Transmission Line Life-Cycle Costs

Dear Attorney McDermott:

The Connecticut Siting Council (Council) requests your responses to the enclosed questions no later than September 29, 2011. To help expedite the Council's review, please file individual responses as soon as they are available.

Please forward an original and 15 copies to this office and a PDF version to be filed electronically. In accordance with the State Solid Waste Management Plan, the Council is requesting that all filings be submitted on recyclable paper, primarily regular weight white office paper. Please avoid using heavy stock paper, colored paper, and metal or plastic binders and separators. Fewer copies of bulk material may be provided as appropriate.

Yours very truly,

Linda Roberts
Executive Director

LR/MP

c: Council Members
Parties and Intervenors

LIFE-CYCLE 2011
UI Pre-Hearing Interrogatories, Set One

1. Provide updated costs for operation and maintenance of The United Illuminating Company's (UI) existing transmission lines (FERC Accounts 563, 564, 571, and 572). Also provide an updated breakdown of UI's existing transmission facilities by voltage, construction type, and single/double circuit.
2. In the 2006 CSC Interrogatories, UI referenced CL&P's response to CSC-2. Provide any updates to the overhead transmission line capital costs (\$/mile) that UI uses to compare alternative single circuit line structures and designs for 115 kV and 345 kV lines of the following types:
 - Wood pole
 - Steel pole
 - Steel towers

If possible, break these costs into the following categories:

- Conductors
- Towers/supporting structures
- Land costs
- Insulation costs
- Other (please specify)

If the costs are not available for all of these categories, provide them in as much detail as possible for the categories UI routinely uses.

3. Confirm that UI still has no plans to construct double circuit structures.
4. In the 2006 CSC Interrogatories, UI referenced CL&P's response to CSC-4. Provide any updates to the underground transmission line capital costs (\$/mile) that UI uses to compare alternative 115 kV and 345 kV lines of the following types:
 - High pressure fluid filled (HPFF)
 - Cross-linked polyethylene (XLPE)

If possible, provide break these costs into the following categories:

- Cable costs
- Piping and associated supporting structures
- Conduit costs
- Other supporting structures
- Land costs
- Installation costs
- Other (please specify)

If the costs are not available for all of these categories, provide them in as much detail as possible for the categories UI routinely uses.

5. Provide an estimate of the total operating and maintenance (O&M) costs per circuit-mile for overhead and underground 115 kV and 345 kV transmission facilities as applicable for the years 2006 through 2010.
6. Does UI use wood poles treated with pentachlorophenol (Penta) for transmission line construction?
 - a) Does UI plan to continue to use Penta or is UI exploring other alternative treatments and/or pole materials for future transmission line construction?
 - b) How would these alternatives affect the life-cycle costs for transmission lines?
7. In the 2006 CSC Interrogatories, UI stated that for transmission line life-cycle cost analysis, the estimated lifespan for transmission lines is 40 years. Is that estimated lifespan still used for transmission life-cycle cost analysis?
8. In the 2006 CSC Interrogatories, UI indicated they agreed with the following life expectancies for 115 kV transmission facilities from the 1996 Acres Report:
 - Wood Pole 40 years
 - Steel Pole 60 years
 - Underground Cable 35 to 40 years
 - a) Does UI still agree with these life expectancies?
 - b) If not, what typical life expectancies would UI use for each of these transmission types?
 - c) Previously UI indicated they would expect similar life expectancies for 345 kV and 115 kV transmission lines of the same types. Would you still agree with this?
 - d) UI indicated an expected operational life of 40 years for both 115 kV and 345 kV HPFF and XLPE underground cable in the 2006 CSC Interrogatories. Please provide any updated life expectancies for 115 kV and 345 kV HPFF and XLPE underground cable based on experiences since the previous interrogatories.
9. Are porcelain insulators still the standard for overhead 115 kV and 345 kV construction? Has UI begun using polymer or glass insulators?
10. Has UI performed any more research, evaluation, or possibly even installation, of composite conductors on any of your transmission facilities? If so, what is the estimated life cycle cost impact? Break into first cost and O&M cost elements.
11. Has UI experienced, in the last five years, issues with construction or maintenance of transmission lines in locations that required special processes or procedures due to environmental sensitivity? If so, describe the situations and the cost impacts.
12. Would UI say the ISO-NE planning and operating standards for design and operations of transmission facilities have had an impact on UI transmission line life cycle costs and if so, to what extent?

13. Has UI identified any other ISO-NE policies or operating procedures that impact transmission line life cycle costs since responding to the previous interrogatories? If so, what are they and what is the anticipated impact?
14. Provide any updates to UI's consideration of using high voltage direct current (HVDC) lines and the impacts to life-cycle costs as compared to alternating current (AC) transmission lines?
15. Provide any comments and/or suggestions regarding how the Council's *Life Cycle 2007* report could be improved.